

Notice of Allowability

Application No.

10/598,664

Examiner

JIMMY T. NGUYEN

Applicant(s)

LINNONMAA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 12/18/2007.
2. ☒ The allowed claim(s) is/are 59-70.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

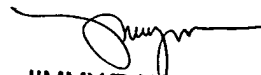
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 12/18/07
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


JIMMY T. NGUYEN
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Patrick Stiennon on February 04, 2008.

The application has been amended as follows:

In claim 59, line 2:

The words "in a paper machine" have been deleted.

In claim 59, line 7:

After the word "after", the words -- and separate from -- have been added.

In claim 59, the last line:

Number "60" has been changed to -- 57 --.

In claim 60, lines 1-4:

The words "The method according to claim 59, further comprising the steps of: using a second pre-moisturizer to moisturize the paper web so that both sides of the web are pre-moisturized; and calendering the paper web" have been changed to:

-- A method of forming a calendered paper web comprising the steps of:

manufacturing and drying a paper web, moisturizing the dried paper web to a moisture content of 4–7% and reeling the paper web into a machine reel;

un-reeling the paper web and calendering the paper web in a multinip calender whose roll assembly is formed of a first set of rolls and a second set of rolls, the second set of rolls arranged after and separated from the first set of rolls in a travel direction defined by the travel of the paper web, the paper web traveling over guide rolls between rolls of the first set of rolls and the second of rolls;

wherein the paper web is calendered in the first set of rolls arranged to form first successive nips between superimposed rolls having a flexible coating and heated metal rolls having a smooth surface following each other alternately in the travel direction;

wherein the paper web is calendered in the second set of rolls arranged to form second successive nips between superimposed rolls having a flexible coating and heated metal rolls having a smooth surface following each other alternately in the travel direction;

moisturizing one surface of the paper web with one pre-moisturizer and using a second pre-moisturizer to moisturize a second opposite surface the paper web so that both sides of the web are pre-moisturized and raising the paper web to a moisture content of 8–12%, and thereafter passing the paper web to a first calender nip of the first successive nips of the first set of rolls, and then through said first successive nips of the first set of rolls;

moisturizing the second opposite surface of the paper web with at least one intermediate moisturizer and raising the paper web to a moisture content of 6 – 10 %, and thereafter passing the paper web to a first calender nip of the second successive

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nips of the second set of rolls, and then through said second successive nips of the second set of rolls;

wherein the one pre-moisturizer is spaced from the first calender nip so that the travel of the paper web in the travel direction toward the first calender nip of the first successive nips of the first set of rolls defines a first absorption time of the moistening medium sprayed by the pre-moisturizer and wherein the intermediate moisturizer on the opposite surface of the paper web is spaced from the first calender nip of the second successive nips of the second set of rolls so that the travel of the paper web in the travel direction toward the first calender nip of the second set of rolls defines a second adsorption time substantially the same as the first adsorption time;

wherein the paper web is calendered -- .

In claim 65, line 2:

After the word "reel", the words -- of a paper web -- have been added.

In claim 65, line 7:

The word "a" has been changed to -- the --.

In claim 65, line 9:

After the word "after", the words -- and separate from -- have been added.

In claim 65, line 33:

After the word "substantially", the words -- the same as -- have been added.

In claim 65, line 35:

Number "60" has been changed to -- 57 --.

In claim 66, lines 1-4:

The words "The apparatus as claimed in claim 65, further comprising a second pre-moisturizer positioned before the calender and arranged to moisturize the second opposite surface of the paper web arranged with the alt least one pre-moisturizer to moisturize the paper web so that both sides of the web are pres-moisturized; and" have been changed to:

-- An apparatus for calendering a paper web comprising:

an unwinder containing a first reel of a paper web with a moisture content of 4 -7%;

a multinip calender following the unwinder and in paper web receiving relation to the first reel contained therein;

a reel-up containing a second reel in paper web receiving relation to the multinip calender;

the paper web extending from the first reel to the second reel;

wherein the multinip calender is formed of a first set of rolls and a second set of rolls, the second set of rolls arranged after and separated from the first set of rolls in a travel direction defined from the first reel to the second reel, the paper web extending over guide rolls between rolls of the first set of rolls and the second set of rolls;

wherein the paper web extends through first successive nips of the first set of rolls, the first successive nips being formed between superimposed rolls having a flexible coating and hot metal rolls having a smooth surface which follow each other alternately in the travel direction;

wherein the paper web extends through second successive nips of the second set of rolls, the second successive nips formed between superimposed rolls having a flexible coating and hot metal rolls having a smooth surface following each other alternately in the travel direction;

one pre-moisturizer positioned before the calender to moisturize a first surface of the web and a second pre-moisturizer positioned before the calender and arranged to moisturize a second opposite surface of the paper web arranged with the at least one pre-moisturizer to moisturize the paper web so that both sides of the web are pre-moisturized, the one pre-moisturizer and the second pre-moisturizer arranged to moisturize the surfaces of the paper web, wherein a portion of the paper web immediately following the pre-moisturizer and extending to the multinip calender has a moisture content of 8–12%;

at least one intermediate moisturizer positioned between the first set of rolls and the second set of rolls of the calender and arranged to moisturize the second and opposite surface of the paper web, wherein a portion of the paper web immediately following the at least one intermediate moisturizer and extending to the second set of rolls has a moisture content of 6 – 10 %;

wherein the one pre-moisturizer is spaced from a first calender nip of the first successive nips of the first set of rolls a selected distance, and wherein the at least one intermediate moisturizer on the opposite surface of the paper web is spaced from a first calender nip of the second successive nips of the second set of rolls substantially the same as the selected distance; and --.

Allowable Subject Matter

Claims 59-70 are allowed.

The following is an examiner's statement of reasons for allowance:

Claims 59, 60, 65 and 66 are allowed because the art of record, considered alone or in combination, neither anticipates nor renders obvious an apparatus and a method for calendaring paper web having a structural arrangement and specific moisture contents as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to JIMMY T. NGUYEN whose telephone number is (571)272-4520. The examiner can normally be reached on Monday-Thursday 7:30am-5:00pm with alternating Friday 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571) 272- 4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTNguyen
February 04, 2008



JIMMY T. NGUYEN
PRIMARY EXAMINER